Job Title: Firmware Developer
Location: Bengaluru, Karnataka, India
Experience: 2+ Years
Employment Type: Full-Time

Job Summary:

We are looking for a talented Firmware Developer to design, implement, and maintain embedded firmware for products based on 32-bit linux processors. The role involves working closely with hardware, software, and product teams to deliver reliable, efficient, and secure embedded solutions.

Key Responsibilities:

- Develop and maintain firmware in C/C++ for 32-bit processors (ARM, RISC-V, MIPS, etc.).
- Work with RTOS or bare-metal environments as required.
- Develop low-level drivers for peripherals (UART, SPI, I2C, ADC, PWM, Ethernet, USB, etc.).
- Integrate and implement industrial/IoT communication protocols (Modbus, MQTT, DLMS, IEC104, etc.).
- Optimize firmware for performance, memory usage, and power efficiency.
- Debug firmware using oscilloscopes, logic analyzers, and JTAG/SWD tools.
- Collaborate with hardware engineers during board bring-up and testing.
- Maintain version control (Git) and follow coding standards.

Required Skills:

- Strong proficiency in **C/C++** for embedded systems.
- Experience with 32-bit microcontrollers and application processors (e.g., STM32, NXP i.MX, ESP32, Renesas).
- Knowledge of peripheral interfaces (UART, SPI, I2C, GPIO, etc.).
- Familiarity with **RTOS** (FreeRTOS, Zephyr) or bare-metal programming.
- Experience with debugging tools (JTAG, SWD, serial console).
- Understanding of embedded system constraints (timing, memory, power).
- Experience with **Yocto Project** or **embedded Linux** BSP customization.
- Knowledge of secure boot, encryption, and OTA firmware update processes.
- Familiarity with industrial protocols and networking (TCP/IP, TLS).
- Exposure to hardware schematics and datasheets.

Bonus:

- Experience with energy metering, industrial automation, or IoT gateways.
- Contributions to open-source embedded projects.

Educational Qualifications:

B.E in Electrical and Electronics Engineering